

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03

1. Identification

- Trade Name: DENTCA Denture Teeth for Carbon printers
- Relevant identified uses of the substance or mixture and uses advised against: Light curable mixture
- Product description: Denture Teeth
- Details of the supplier of the safety data sheet:
 - i. Supplier: DENTCA Inc.
357 Van Ness Way, Suite #250,
Torrance, CA 90501
USA
Telephone: +1-424-558-8726
Fax: +1-424-558-8738
info@dentca.com
www.dentca.com
 - ii. Emergency phone:
During business hours: +1-855-433-6822

2. Hazard(s) identification

- Classification of the substance or mixture:



GHS 07

Eye Irrit. 2A H319 Causes serious eye irritation.
Aquatic Acute 3 H402 Harmful to aquatic life.

- Label elements:
 - GHS label elements
- The product is classified and labeled according to the Globally Harmonized System (GHS)
- Hazard pictograms

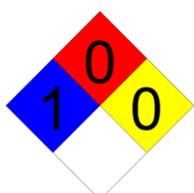


GHS 07

- Signal word: Warning
- Hazard Statements:
Causes serious eye irritation.
Harmful to aquatic life
- Precautionary statements:

- Wear eye protection / face protection.
- Avoid release to the environment.
- Wash thoroughly after handling.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
- Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- Dispose of contents/container in accordance with local/regional/national international regulations.
- Unknown acute toxicity:
- The mixture consists of component(s) of unknown toxicity.
- Classification system:

i) NFPA rating (scale 0-4)



Health = 1
Fire = 0
Reactivity = 0

ii) HMIS ratings (scale 0-4)



Health = 1
Fire = 0
Reactivity = 0

iii) **Hazard(s) not otherwise classified (HNOC):** None known

3. Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous Components:		
Proprietary	Metacrylate monomer Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	40-60%
CAS: 3290-92-4	Propylidynetrimethyl trimethacrylate	1-10%
Proprietary	Urethane methacrylate Skin Sens. 1, H317	15-45%
Proprietary	Initiator Skin Sens. 1, H317; Aquatic Chronic 4, H413	≤3%
Proprietary	Inhibitor Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	≤1%
Proprietary	Pigment 1	≤2.5%

	 Carc. 1B, H350; Repr. 1A, H360; STOT RE 2, H373;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
Proprietary	Pigment 2  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335; Aquatic Acute 2, H401	≤2.5%
Proprietary	Pigment 3  Carc. 2, H351;  Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤2.5%
Proprietary	Pigment 4  Flam. Liq. 3, H226	≤2.5%
Proprietary	Pigment 5  Resp. Sens. 1A, H334; STOT RE 1, H372; ~□ Skin Sens. 1A, H317; Combustible Dust	≤2.5%
Proprietary	Pigment 6	≤2.5%

4. First-Aid Measures

- **Description of first aid measures:**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
If eye irritation occurs, consult a doctor.
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5. Fire-Fighting Measures

- **Extinguishing media:**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters:**
- **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Dispose of the collected material according to regulations.

- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. Handling and Storage

- **Handling**
- **Precautions for safe handling:** Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep protective respiratory device available.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** No further relevant information available..
- **Specific end use(s):** No further relevant information available.

8. Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**

3290-92-4 Propylidynetrimehyl trimethacrylate	
WEEL	Long-term value: 1 mg/m ³ Skin
Inhibitor	
REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³
Pigment 1	
PEL	Long-term value: 0.005* mg/m ³ Ceiling limit value: 0.1** mg/m ³ *as Cr(VI) **as CrO ₃ ; see 29 CFR 1910.1026
REL	Long-term value: 0.0002 mg/m ³ as Cr; See Pocket Guide Apps. A and C
TLV	Long-term value: 0.01 mg/m ³ as Cr

Ingredients with biological limit values:	
Pigment 1	
BEI	25 µg/L urine end of shift at end of workweek Total chromium (fume)
	10 µg/L urine increase during shift Total chromium (fume)

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**



Tightly sealed goggles

9. Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Yellow-white opaque

· **Odor:** Characteristic odor

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· **Flash point:** >100 °C

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

- **Vapor pressure:** Not determined.
- **Density:**
 - Relative density:** 1.09
 - Vapor density:** Not applicable.
 - Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with:**
 - Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not applicable.
- **Other information:** No further relevant information available.

10. Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11. Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
Urethane methacrylate		
Oral	LD50	>5000 mg/kg (rat)
Inhibitor		
Oral	LD50	1600 mg/kg (rat)
Pigment 1		
Oral	LD50	>10000 mg/kg (rat)
Pigment 2		
Oral	LD50	4890 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Pigment 3		
Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.82 mg/l (rat)
Pigment 6		
Oral	LD50	> 2000 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** Irritating effect.
Causes serious eye irritation.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
Carcinogenic.
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**

- Group 1 - Carcinogenic to humans
- Group 2A - Probably carcinogenic to humans
- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to its carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

Proprietary	Pigment 1	1
Proprietary	Pigment 2	2B

· NTP (National Toxicology Program):	
Pigment 1	K

· OSHA-Ca (Occupational Safety & Health Administration):	
None of the ingredients are listed.	

12. Ecological Information

· Toxicity:

· Aquatic toxicity:	
Urethane methacrylate	
EC50	>1.2 mg/l (daphnia)
Pigment 3	
EC50	>1000 mg/l (Water flea)

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13. Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14. Transport Information

- **UN-Number:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.

- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15. Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**

· **SARA (Superfund Amendments and Reauthorization):**

· Section 355 (extremely hazardous substances):
None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):
Pigment 1

· TSCA (Toxic Substances Control Act):
All ingredients are listed.

· **California Proposition 65:**

· Chemicals known to cause cancer:
Pigment 1
Pigment 3

· Chemicals known to cause reproductive toxicity for females:
Pigment 1

· Chemicals known to cause reproductive toxicity for males:
Pigment 1

· Chemicals known to cause developmental toxicity:
Pigment 1

· **Carcinogenic categories:**

· EPA (Environmental Protection Agency):	
Pigment 1	A(inh), D(oral), K/L(inh), CBD(oral)

· TLV (Threshold Limit Value established by ACGIH):	
Pigment 1	A1
Pigment 3	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health):
Pigment 1
Pigment 3

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS07

- **Signal word:** Warning
- **Hazard statements:**
Causes serious eye irritation.
Harmful to aquatic life.
- **Precautionary statements:**
Wear eye protection / face protection.
Avoid release to the environment.
Wash thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:
The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· State Right to Know:		
Proprietary	Metacrylate monomer  Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	40-60%
CAS: 3290-92-4	Propylidynetrimethyl trimethacrylate	1-10%
Proprietary	Urethane methacrylate  Skin Sens. 1, H317	15-40%
Proprietary	Inhibitor  Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	≤1%
All ingredients are listed.		

- **Information about limitation of use:**
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16. Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

- **Date of preparation / last revision:** 3/31/2016 / -

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1A: Sensitisation - Respirat., Hazard Category 1A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Skin Sens. 1A: Sensitisation - Skin, Hazard Category 1A
Carc. 1B: Carcinogenicity, Hazard Category 1B
Carc. 2: Carcinogenicity, Hazard Category 2
Repr. 1A: Reproductive toxicity, Hazard Category 1A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Acute 2: Hazardous to the aquatic environment - AcuteHazard, Category 2
Aquatic Acute 3: Hazardous to the aquatic environment - AcuteHazard, Category 3
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4
- * **Data compared to the previous version altered.**